



US006477150B1

(12) **United States Patent**
Maggenti et al.

(10) Patent No.: **US 6,477,150 B1**
(45) Date of Patent: **Nov. 5, 2002**

(54) **SYSTEM AND METHOD FOR PROVIDING GROUP COMMUNICATION SERVICES IN AN EXISTING COMMUNICATION SYSTEM**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/518,985**

(22) Filed: **Mar. 3, 2000**

(51) Int. Cl.⁷ **H04L 12/66**

(52) U.S. Cl. **370/312; 370/462**

(58) Field of Search **370/328, 329, 370/335, 342, 349, 352, 353, 354, 355, 356, 390, 401, 432, 465, 466, 474, 447, 461, 312**

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,164,985 A * 11/1992 Nysen et al. 380/9
5,387,905 A * 2/1995 Grube et al. 340/825.52
5,436,893 A * 7/1995 Burnett 370/392
5,450,405 A * 9/1995 Maher et al. 370/58.2
5,479,477 A 12/1995 McVey et al. 370/58
5,491,835 A 2/1996 Sasuta et al. 455/34.1
5,511,232 A 4/1996 O'Dea et al. 455/54.1
5,524,273 A 6/1996 Coley et al. 455/17
5,530,914 A 6/1996 McPheters 455/34.1
5,530,915 A 6/1996 Shaughnessy et al. 455/51.2
5,530,916 A 6/1996 Schultz 455/54.1
5,530,918 A 6/1996 Jasinski 455/56.1
5,535,426 A 7/1996 Leigh et al. 455/34.1
5,537,684 A 7/1996 Cassidy et al. 455/34.1
5,542,108 A 7/1996 Sasuta 455/34.1
5,555,447 A 9/1996 Kozzin et al. 455/72

5,564,071 A 10/1996 Liou et al. 455/56.1
5,612,959 A * 3/1997 Thkase et al. 370/390
5,850,611 A 12/1998 Krebs 455/518
5,901,142 A 5/1999 Averbuch et al. 370/329
5,912,882 A * 6/1999 Yafuso et al. 370/270
5,914,958 A 6/1999 Chinitz et al. 370/441
6,005,848 A 12/1999 Grube et al.
6,081,601 A * 6/2000 Raivisto 380/270
6,118,771 A * 9/2000 Tajika et al. 370/328
H1894 H * 10/2000 Fletcher et al. 455/403
6,160,544 A * 12/2000 Hayashi et al. 345/327
6,301,255 B1 * 10/2001 Park 370/399

FOREIGN PATENT DOCUMENTS

EP 0566957 4/1993
WO 9501024 1/1995

OTHER PUBLICATIONS

TR45; Data Service Options for Spread Spectrum Systems: Async Data and Fax Services; Mar. 1999.

* cited by examiner

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(57) **ABSTRACT**

The present invention is a system and method for providing group communication services in an existing communication system. Group communications are enabled by installing a communications manager in a data network such as the Internet. The communications manager acts as a configurable switch, allowing communications from any group member to be transmitted to all other group members. The communications processed by the communications manager take the form of data packets, suitable for transmission over the data network. The data packets are generated by communication devices operating within the communication system. The use of the communications manager further allows users of other communication systems and devices to participate in group communications with each other.

15 Claims, 12 Drawing Sheets

